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NATIONAL CRITICALITY EXPERIMENTS RESEARCH CENTER

NCERC NEWS

Apr. – Jun. 2021

CRITICAL ASSEMBLY OPERATIONS

National Center for Nuclear Security (NCNS) samples were irradiated on Godiva.

Fission chamber testing for NCNS was conducted on Flat-Top. This operation involved multiple core configuration changes, which doubled as important training opportunities for NEN-2 Crew Member Trainees.

These experiments support nuclear forensics research.



▲ NCNS sample installed on Godiva.



▲ NEN-2's Justin Martin installs and aligns the Flat-Top plutonium core.



▲ NCNS fission chamber test configuration.

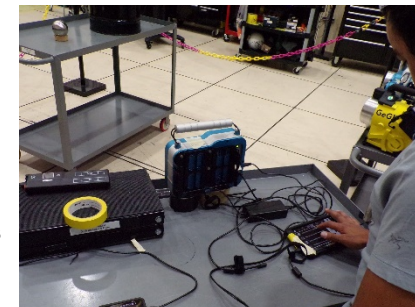
CRITICALITY SAFETY CLASSES

Three criticality safety classes were completed in June, including a NCSP Manager's Class, PF4 Class, and one for Emergency Response.

► Rene Sanchez (NEN-2) instructs a PF4 Class student handling the BeRP ball.



◀ NCSP Manager's Class attendees handle the BeRP ball.



▲ Detectors surround the Np sphere during a measurement campaign.

RADIATION TEST OBJECT (RTO) BUILDS + MEASUREMENTS

NCERC built multiple Radiation Test Objects (RTOs) for Emergency Response measurement campaigns. These campaigns ran for 5 weeks in May and June.

ADDITIONAL SUPPORT OPERATIONS

NCERC performed **Radiography operations at Area 11** in support of the MSTs Dense Plasma Focus (DPF) Facility to measure internal characteristics of DPF heads.

MC&A Inventory, Quarterly Maintenance, Annual Surveillance and In-Service Inspection procedures (April 2021), **Annual Sealed Source Leak Tests** (May 2021) were also completed in support of NCERC operations.



▲ A visitor performs measurements on an RTO.